

IN THE CLAIMS

1. (currently amended) A method of fabricating an interconnection members for a microelectronic device, the method comprising:

providing a support substratestructure including a dielectric, said support structure having oppositely-directed a first and second surfaces;

coupling a conductive sheet ~~having a uniform thickness~~ to the first surface of the support substratestructure; and

selectively removing portions of the conductive sheet thereby producing a plurality of substantially rigid, elongated posts protruding parallel to one another from the first surface of the support substratestructure, each post having a ~~base surface and a top surface, wherein each base surface is disposed on the support substrate, the top surfaces being~~ remote from the support substratestructure and substantially coplanar with respect to one another;

providing a microelectronic device so that said microelectronic device overlies said second surface of said support structure, said second surface of said support structure facing away from said posts; and

electrically connecting at least some of said posts to said microelectronic device.

2. (currently amended) The method as claimed in claim 1, wherein the support substratestructure is a flexible dielectric substratestructure.

3. (previously presented) The method as claimed in claim 2, wherein each said post has a direction of elongation and at least one edge extending along the post in said direction of elongation.

4. (currently amended) The method as claimed in claim 2, wherein each post has a cooling tower shape, each post tapering inwardly from ~~said a~~ base surface to a narrow region between the

base surface and the top surface and flaring outwardly from said narrow region toward said top surface.

5. (previously presented) The method as claimed in claim 4, wherein each said post has at least a direction of elongation and one edge extending along the post in said direction of elongation.

6. (original) The method as claimed in claim 2, wherein the conductive sheet is selected from the group consisting of copper, brass, and bronze.

7. (original) The method as claimed in claim 6, wherein the conductive sheet has a thickness between 125 and 500 microns.

8. (previously presented) The method as claimed in claim 7, wherein said selectively removing step is performed so that each of said posts has an exposed surface, the method further comprising plating a conductive layer to the exposed surface of each of said posts.

9. (currently amended) The method as claimed in claim 1, wherein the step of selectively removing comprises:

providing etch-resistant portions to a surface of the conductive sheet remote from the support ~~substrate~~structure; and etching the conductive sheet, the etch-resistant portions being substantially unaffected by the etching process.

10. (currently amended) The method as claimed in claim 9, wherein the providing ~~etch~~—etch-resistant portions step includes:

applying a photoresist layer to the conductive sheet; selectively developing the photoresist layer to form ~~etch~~—etch-resistant portions and remaining portions; and removing remaining portions of the photoresist layer.

11. (currently amended) The method as claimed in claim 1, ~~further comprising:~~

~~providing a wherein~~ said microelectronic device ~~having~~
has a plurality of bond pads; and

said step of electrically connecting said
microelectronic device to said posts includes electrically
connecting said bond pads to said posts.

12. (currently amended) The method as claimed in claim 11,
~~wherein said step of providing said microelectronic device is~~
~~performed so that said microelectronic device overlies a second~~
~~surface of said support substrate, said second surface of said~~
~~support substrate being remote from said posts, the method~~
further comprising disposing a compliant layer structure between
the second surface of the support substrate structure and the
microelectronic device.

13. (currently amended) The method as claimed in claim
112, further comprising soldering a portion of each post remote
from said support substrate structure to a contact on a printed
circuit board.

14. (currently amended) The method as claimed in claim
112, further comprising disposing each post within and in
electrical contact with a respective socket on a printed circuit
board.

15. (currently amended) The method as claimed in claim 11,
~~wherein said support substrate has a second surface the step of~~
electrically connecting said bond pads to said posts includes:

providing a plurality of conductive vias extending
from the first surface of the support substrate structure to the
second surface of the support substrate structure, each via
positioned beneath and in electrical contact with one post; and

connecting each bond pad to a respective post through
a respective conductive via.

16. (currently amended) The method as claimed in claim 15,
~~wherein the connecting said step of electrically connecting said~~
bond pads to said posts includes providing brazing buttons each

extending from one via and coupling each one of said brazing buttons to one of said bond pads on a said microelectronic element.

17. (currently amended) The method as claimed in claim 16, further comprising the step of removing the support ~~substrate~~structure after the brazing buttons have been attached to the bonding pads.

18. (currently amended) The method as claimed in claim 9, wherein the ~~etch~~etch-resistant portions include metallic portions.

19. (original) The method as claimed in claim 18, wherein the metallic portions are comprised of nickel.

20. (original) The method as claimed in claim 19, further comprising the step of coupling a highly conductive layer to each of the metallic portions.

21. (canceled)

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38. (canceled)

39. (withdrawn) A method of making a connection component comprising the steps of:

(a) providing a plurality of portions of a conductive, etch-resistant metal on a surface of a metallic sheet; and

(b) etching said sheet from said surface so as to form posts extending generally parallel to one another aligned with said portions of said etch-resistant metal.

40. (withdrawn) A method as claimed in claim 39 wherein said etching step is performed so that said posts are elongated and a portion of said etch-resistant metal projects outwardly from each said post in directions transverse to the direction of elongation of such post at one end thereof.

41. (withdrawn) A method as claimed in claim 39 wherein said etch-resistant metal includes a solder.

42. (withdrawn) A method as claimed in claim 39 wherein said etch-resistant metal includes a metal adapted to facilitate bonding of said posts to contact pads.

43. (withdrawn) A method as claimed in claim 39 further comprising the step of providing a support structure on a surface of said sheet opposite from the surface having said conductive portions.

44. (withdrawn) A method as claimed in claim 43 wherein said support structure is provided prior to said etching step.

45. (withdrawn) A method of treating a component comprising the steps of:

(a) providing a component including a plurality of metallic posts extending generally parallel to one another and having solder on tips of said posts but not covering other portions of said posts; and

(b) reflowing the solder so that the solder coats the posts.



46. (withdrawn) A method as claimed in claim 45 wherein said providing step is performed so that, prior to said reflowing step, said solder covers only the tips of said posts.

47. (withdrawn) A method as claimed in claim 45 wherein said providing step includes depositing portions of said solder on a surface of a metallic sheet and etching said sheet from said surface.

48. (currently amended) The method as claimed in claim 11 further comprising providing electrically conductive leads on said support ~~substrate~~structure so that said leads are electrically connected to said posts, said step of connecting said bond pads of said microelectronic device and said posts including connecting said bond pads and said leads.

49. (currently amended) The method as claimed in claim 48 wherein said step of providing electrically conductive leads includes providing leads formed from an etch-resistant metal on said first surface of said support ~~substrate~~structure.

50. (currently amended) The method as claimed in claim 49 wherein said step of providing said etch-resistant metal is performed before said step of coupling said conductive sheet to said first surface of said support ~~substrate~~structure.

51. (new) The method as claimed in claim 1 further comprising the steps of placing said support structure on a circuit board so that said posts project from said support structure to said circuit board and connecting said posts to electrically conductive features of said circuit board.

52. (new) A method as claimed in claim 12 wherein said compliant structure includes a compliant layer.

53. (new) A method as claimed in claim 12 wherein said compliant structure includes a plurality of compliant pads.

54. (new) A method as claimed in claim 1 wherein said conductive sheet has a uniform thickness and said top surfaces



of said posts are substantially coplanar with respect to one another.

55. (new) A method as claimed in claim 54 wherein said posts have base surfaces on said support structure.

56. (new) A method of fabricating an interconnection for a microelectronic device, the method comprising:

providing a support structure having a first surface and a second surface;

coupling a conductive sheet to the first surface of the support structure;

selectively removing portions of the conductive sheet thereby producing a plurality of substantially rigid, elongated posts protruding parallel to one another from the first surface of the support structure, each post having a top surface, the top surfaces being remote from the support structure, wherein each said post has a direction of elongation and at least one edge extending along the post in said direction of elongation.

57. (new) A method as claimed in claim 56 wherein said conductive sheet has a uniform thickness and top surfaces of said posts are substantially coplanar with respect to one another.

58. (new) A method as claimed in claim 57 wherein said posts have base surfaces on said support structure.

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